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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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09/489,226

01/21/2000

Tomasz J. Cholewo

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07/07/2004

Lexmark International, Inc
740 West New Circle Road
Lexington, KY 40550

EXAMINER

VIDA, MELANIE M

ART UNIT

PAPER NUMBER

2626

DATE MAILED: 07/07/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/489,226

Applicant(s)

CHOLEWO ET AL.5

Examiner

Melanie M Vida

Art Unit

2626

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 26 April 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-6,11,12,14,15,22 and 23 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 4-6 is/are allowed.
- 6) ☒ Claim(s) 1,11,12,14 and 22 is/are rejected.
- 7) ☒ Claim(s) 2,3,15 and 23 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Amendment

1. This action is responsive to an after final amendment filed 4/26/04. Claims 1-6, 11-12, 14-15, and 22-23 are pending. Claims 7-10 are cancelled. Claims 16-21 are cancelled. The finality of the office action has been withdrawn.

Response to Arguments

2. Applicant's arguments with respect to claim 1 have been considered but are moot in view of the new ground(s) of rejection. In view of the Applicant's remarks, it is agreed that Decker does not map CIELAB or other color space having a lightness component as described and claimed. Thus a new ground of rejection of Applicant's admitted prior art in view of Wang, US-PAT-NO: 6,330,078 B1 is made below.

Claim Rejections - 35 USC § 103

3. **Claims 1, 11-12** are rejected under 35 U.S.C. 103(a) as being unpatentable over Applicant's Admitted Prior Art (hereinafter, Admission), and further in view of Wang, US-PAT-NO: 6,330,078 B1, (hereinafter, Wang).

Regarding, **claim 1**, the Admission teaches a method of converting a first gamut in CMY space to a first gamut in CMYK color space through a UCR method, which reads on "a method comprising: converting a first gamut in a CMY color space to a first gamut in a CMYK color space", (see page 1, lines 5-25 and page 2, lines 1-11).

Admission does not expressly disclose, “converting the first gamut in CMYK color space to a gamut in a color space having a lightness component;” “rescaling a lightness component of a gamut value in the color space having a lightness component to form a modified gamut;” and “converting the modified gamut to a second gamut in a CMYK color space”.

However, Wang, as shown in figure 1, depicts in block (24) a transform (T) for converting a first CMYK gamut, (i.e. $CMYK_1$) into a CIELAB gamut, (i.e. Lab_1) having a lightness component (i.e. L), which reads on “converting the first gamut in CMYK color space to a gamut in a color space having a lightness component”, (col. 4, lines 20-22 and col. 4, lines 44-50).

Additionally, Wang depicts converting the first CIELAB gamut (Lab_1) into a modified CIELAB gamut (28) (Lab_2), which reads on “rescaling a lightness component of a gamut value in the color space having a lightness component to form a modified gamut; and”, (col. 4, lines 50-54).

Finally, Wang depicts the inverse transform (30) converting the modified CIELAB color space (Lab_2) into a second CMYK color gamut ($CMYK_2$) by an equation wherein

$$CMYK_2 = T^{-1}(Lab_0 - \Delta Lab),$$

which reads on “converting the modified gamut to a second gamut in a CMYK color space”, (col. 4, 34-38 and col. 4, lines 53-57).

At the time the invention was made, it would have been obvious to one of ordinary skill in the art to modify Admission in view of Wang.

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One of ordinary skill in the art would have been motivated to use Wang's three-stage color gamut conversion in order to provide a CMYK₂ with a more accurate representation of Lab₀, given the express suggestion of Wang, (col. 4, lines 56-57).

Regarding, **claim 11-12**, please refer to the corresponding rejection in claim 1.

Regarding, **claim 14**, it is obvious Wang teaches the claimed subject matter, "linearly rescaling the lightness component of the CIELAB space gamut" as it is well-known that subtraction is a linear operation such as in (**Lab₀-ΔLab**), (col. 4, lines 35-37).

Regarding, **claim 22**, please refer to the corresponding rejection in claim 14.

Allowable Subject Matter

4. **Claims 2-3, 15 and 23** are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

5. **Claims 4-6** are allowed. **Claim 4** is allowed because of the prior art of record, specifically Wang, US-PAT-NO: 6,330,078 does not teach or suggest the collective features of the invention, such as the step of modifying the gamut in the CIELAB color space by changing a lightness component such that the upper surface of the first gamut in the CMY space is preserved and the lower surface of the first gamut in the CMY color space is mapped to the bottom surface of the gamut of a full CMYK color space to form a gamut in an expanded CIELAB color space. **Claims 5-6** are allowed for depending on allowable subject matter in claim 4.

Conclusion

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Melanie M Vida whose telephone number is (703) 306-4220. The examiner can normally be reached on 8:30 am 5:30 pm.


If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kimberly A Williams can be reached on (703) 305-4863. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Melanie M Vida
Examiner
Art Unit 2626

MMV
mmv

July 2, 2004


KIMBERLY WILLIAMS
SUPERVISORY PATENT EXAMINER